

## The North American Intruder *Leptoglossus occidentalis* Heidemann (Heteroptera: Coreidae) Settled Down in Ukraine

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**Putshkov, P. V., Gubin, A. I., Popov, G. V., Kalesnik, V. I. & Syzhko, V. V. The North American intruder *Leptoglossus occidentalis* Heidemann (Heteroptera: Coreidae) settled down in Ukraine. Summary.** The invasive Nearctic bug *L. occidentalis* recorded in Crimea and Zaporizhzhia Region in 2011 is found to appear almost simultaneously also in Dnipropetrovsk and Donetsk Regions.

**Key words:** Heteroptera, Coreidae, *Leptoglossus occidentalis*, invasive insects, Ukraine, pine, pests.

**Пучков П. В., Губин А. И., Попов Г. В., Калесник В. И. и Сыжко В. В. Северноамериканский клоп-вселенец *Leptoglossus occidentalis* Heidemann (Heteroptera: Coreidae), обосновавшийся в Украине. Резюме.** Обнаружено, что инвазивный вид клопа-крайовика *L. occidentalis*, отмеченный в Крыму и Запорожской области в 2011 гг., практически одновременно появился в других местах Украинского Левобережья (Днепропетровская и Донецкая области).

**Ключевые слова:** Heteroptera, Coreidae, *Leptoglossus occidentalis*, инвазивные насекомые, Украина, сосна, вредители.

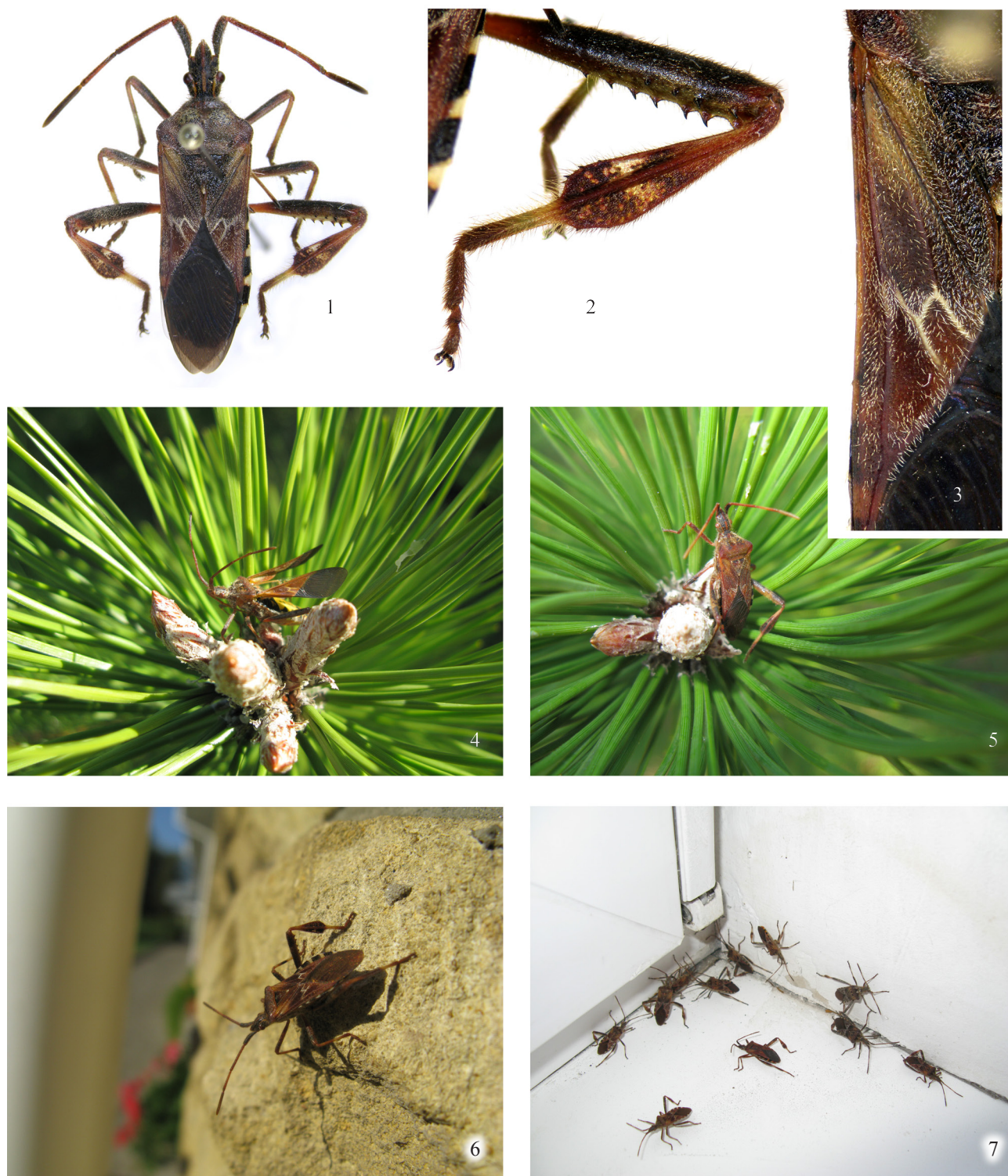
**Пучков П. В., Губин А. И., Попов Г. В., Калесник В. И. і Сижко В. В. Північноамериканський клоп-вселенець *Leptoglossus occidentalis* Heidemann (Heteroptera: Coreidae), що оселився в Україні. Резюме.** З'ясовано, що інвазивний вид клопа-крайовика *L. occidentalis*, відмічений в Криму і Запорізькій області в 2011 рр., практично водночас з'явився в інших місцях Українського Лівобережжя (Дніпропетровська та Донецька області).

**Ключові слова:** Heteroptera, Coreidae, *Leptoglossus occidentalis*, інвазивні комахи, Україна, сосна, шкідники.

The coreid bug *Leptoglossus occidentalis* Heidemann, 1910 (Hemiptera: Coreidae) (Figs 1, 6) known as the Western Conifer Seed Bug and having primarily Nearctic origin has been recently recorded from Simferopol (Crimea) and Dneprorudny (Zaporizhzhia Region) (Gapon, 2012). The insects were captured during September–December 2010–2011.

Here we add the localities in two other Ukrainian regions. The first is Verkhnedneprovsk in Dnipropetrovsk

Region (August–October 2012). The specimens were collected and/or observed by V. V. Syzhko and V. N. Kalesnik on balconies and in houses situated not far from the urban conifers plantations. The other locality is Donetsk, where the feeding specimens were collected and/or observed by A. I. Gubin, D. L. Musolin and G. V. Popov in Donetsk Botanical Garden on pines (mostly *Pinus nigra pallasiana* D. Don.) in September and October 2011–2012 (Figs 4–5). Most of them were collected in 2010–2012 in



Figs 1–7. *Leptoglossus occidentalis*: 1 — habitus, dorsal, 2 — metafemur and metatibia, 3 — forewing, anterior portion, 4–5 — bug on a young cone of *Pinus nigra pallasiana*, 6 — adult bug on a stone, 7 — bug aggregation on a window pane.

buildings, where they sometimes aggregated before the hibernation (Fig. 7).

*Leptoglossus occidentalis* could be easily distinguished from the aboriginal European Coreidae by the peculiar leaflike expansions on the metatibia (Figs 1–2). The maximal width of the metatibia is equal or a

bit smaller than the interocular distance. Other diagnostic features are the whitish zigzag 'W' mark in the center of the forewings next to the basal part of membrane, and denticles on the underside of all femora (Fig. 2). Head subpentagonal, bearing neither longitudinal median furrow before eyes nor denticles on antennal tubercles (Fig. 2).

The proboscis is very long: it almost attains the half of the length of the abdomen. The humeral angle does not protrude over the level of outer corial margin. The main color is brown of various tints. The first antennal joint with a black dorsal longitudinal stripe. The length of *L. occidentalis* (with hemelytra) is 15–20 mm (17–19 mm in the studied Ukrainian specimens).

The adult aboriginal European Coreidae are smaller (6–16 mm), their metatibia have no leaflike expansion and its width throughout all the length is considerably (3–10 times) smaller than the interocular distance. Other characters are completely or partially different from those of *L. occidentalis*.

*L. occidentalis* demonstrates the prodigious recent expansion. Its native range is situated westwards to the Rocky Mountains, from British Columbia and Alberta in the north to Mexico and California in the south. In 1956 it was recorded in Iowa and till now this species populated most of the Eastern United States from Texas to the south of Canada. In 1999 it was recorded in Italy (Veneto Province) and by now it occupies all Southern and Middle Europe from Portugal, Andalusia, Sicily, Peloponnese, European Turkey in the south to southern Ireland, Britain (except Scotland), south of Norway and Sweden, southern Poland, Romania, Moldova, southern Ukraine and south-eastern Russia (Rostov-na-Donu). In addition, this species has penetrated to Japan and China. The transport pathways are passive (eggs in sawdust, wood material or seed sources for culturing trees in nurseries or even whole plant material such as Christmas trees) and active: it flies well (e.g., Mitchell, 2000, Dusoulrier et al., 2007; Rabitsch, 2008; Petrakis, 2011; Gapon, 2012).

Almost all old and new distributional areas of this bug are situated both in America and Europe southwards of

the January isotherm  $-12^{\circ}\text{C}$ , and southwards of absolute minimum isotherm of  $-5^{\circ}\text{C}$  (Dusoulrier & al., 2007; Rabitsch, 2008; Gapon, 2012). So, this species probably could populate all Ukrainian territories, where its host plants (pines and other conifers) are present.

## Acknowledgements

We thank Dmitry L. Musolin (St. Petersburg, Russia), who inspired observations of this species in the Donetsk Botanical Garden, and Valery A. Korneyev (I.I. Schmalhausen Institute of Zoology, Kiev, Ukraine), who insisted on publication of these data and for his critical comments on the manuscript.

## References

- Gapon, D. A. (2012). First records of the Western Conifer Seed Bug *Leptoglossus occidentalis* Heidemann (Heteroptera, Coreidae) from Russia and Ukraine, regularities of its distribution and possibilities of its range expansion in the Palaearctic Region. *Entomologicheskoe Obozrenie*, 91(3), 559–568 (in Russian).
- Dusoulrier, F., Lupoli R., Aberlenc H.-P. & Streito J.-C. (2007). L'invasion orientale de *Leptoglossus occidentalis* en France: bilan de son extension biogéographique en 2007 (Hemiptera Coreidae). *L'Entomologiste*, 63(6), 303–308.
- Mitchell, P. L. (2000). Leaf-Footed Bugs (Coreidae). In: Schaefer, D. W. & Panizzi, A. R., eds. *Heteroptera of economic importance*. Boca Raton, CRC Press, 337–403.
- Petrakis, P. V. (2011). First record of *Leptoglossus occidentalis* (Heteroptera: Coreidae) in Greece. *Entomologica Hellenica*, 20, 83–93.
- Rabitsch, W. (2008). Alien true bugs of Europe. *Zootaxa*, 1827, 1–44.